



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/680,611      | 10/07/2003  | Richard M. Lum       | Lum 6-11-9-8        | 5769             |

7590 10/15/2004

Docket Administrator (Room 3J-219)  
Lucent Technologies Inc.  
101 Crawfords Corner Road  
Holmdel, NJ 07733-3030

EXAMINER

HOFFMANN, JOHN M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1731

DATE MAILED: 10/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/680,611

Applicant(s)

LUM ET AL.

Examiner

John Hoffmann

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 18-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7 October 2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### DETAILED ACTION

Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

This application filed under former 37 CFR 1.60 lacks the necessary reference to the prior application.

If applicant desires priority under 35 U.S.C. 120 based upon a previously filed application, specific reference to the earlier filed application must be made in the instant application. For benefit claims under 35 U.S.C. 120, 121 or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of the applications. This should appear as the first sentence of the specification following the title, preferably as a separate paragraph unless it appears in an application data sheet. The status of nonprovisional parent application(s) (whether patented or abandoned) should also be included. If a parent application has become a patent, the expression "now Patent No. \_\_\_\_" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the

Art Unit: 1731

application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A priority claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed claim for priority under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "60" has been used to designate both a process (figure 5) and a single step of that same process (upper right box of figure 5). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 50. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the

Art Unit: 1731

changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heitmann 5609666 in view of Fleming 5221306 and optionally in view of Berkey 5917109

Heitmann discloses a preform with a core and layers (see col. 1, lines 41-49 and 65; col. 4, lines 12-15; as well as figure 3). Furthermore, figure 3 shows numerous layers, any 1 or more layers would form a central core, one layer out from that could be a cladding layer, and a layer that is even further out from the core could be an overladding layer. Berkey is cited to more clearly show that having various cladding layers is well known and imparts known advantages.

It is noted that Heitmann does not teach the OD variation. However, Fleming teaches that it is important to have no eccentricity in fiber preforms (see col. 1, lines 40-58) and that such is "highly advantageous". It would have been obvious to perform the

Art Unit: 1731

Fleming process on the Heitmann preform so as to eliminate any eccentricity. Fleming does not disclose the present value of 0.1% OD variation at one longitudinal position.

Looking to figure 6 and col. 5, lines 32-42 of Fleming: the 0-0-0-0 line shows a variation of about 0.1% as follows: There is one diameter that would run from the 0 degree position to the 180 degree position. There would also be a diameter which runs from the 20 degree position to a location 180 degrees opposite (i.e. the 200 degree position). From the graph of figure 6: at 0 degrees, the distance  $d$ , is approximately 11.74 mm, at 20 degrees, ~11.75 mm; at 180 degrees, ~ 11.74 mm; and at 200 degrees, ~11.74 mm. Thus the 0-180 has the sum of the two  $d$ 's to be 23.48mm and for 20-200, the sum is 23.49. Thus the difference between the 0 to 180 diameter and the 20-200 diameter is about 0.01 mm. And this particular OD variation ( $0.01/23.49$ ) is less than 0.1%.

It is noted that the broadest reasonable interpretation of claim 18 is that there need only be on variation that is 0.1% or less. A narrow reasonable interpretation is that all variations are less than 0.1%. However, the Office always chooses the broadest reasonable interpretation.

Alternatively, it would have been obvious to make all the variations as small as possible, because Fleming teaches that variations are detrimental. Still further, it would have been obvious to make the preform as large as possible/desired – so as to make as much fiber as possible/desired. So when making a large preform, the same small absolute variations that Fleming discloses – would amount to a much smaller relative variation. And the claims only require a relative variation – not an absolute. In other words, if one made the Heitmann preform to be 200 mm in diameter, one could have a

Art Unit: 1731

variation of 0.2 mm – and the 0-0-0-0 line clearly does not have any variation that is even close to 0.2mm.

Claim 19: it would have been obvious to make the preform as large as desired.

A change in size is generally not a patentable invention.

In re Rose , 220 F.2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package “of appreciable size and weight requiring handling by a lift truck” where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.); In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) (“mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled.” 531 F.2d at 1053, 189 USPQ at 148.). In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

Claims 20-21: col. 2, lines 32-34 teaches hydroxide content below 0.01 ppm.

Claim 22 calls for a variation of less than 0.05 %. The above mentioned 0.01mm/23.49mm yields a variation of 0.042%.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heitmann 5609666 in view of Fleming 5221306 and optionally in view of Berkey 5917109 as applied to claim 18 above, and further in view of Suto 4367085.

Claim 23 requires a constant diameter of an inner diameter – which the first three references do not teach. Suto teaches that having a constant diameter is important to transmission bandwidth properties (col. 1, lines 32-46) and that one can limit fluctuations to less than 1% (col. 9, lines 35-38). It would have been obvious to have all diameters to be as constant as possible at all locations/angles along the preform



because it is known that variations in diameters in a single location or in multiple axial locations are detrimental. Although there is express statement that the inner diameter should be constant at all locations, it would have been obvious to perform the method so as to all internal diameters are also constant, because one would expect that variations would result in variations in the final properties of the fiber. One would not reasonably expect that one could obtain a final preform with tight tolerances by using an intermediate product with lax tolerances.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is no antecedent basis for "the length". Whereas a preform would have a actual length, there is typically some sort of sub-length that one might consider an effective length. This is because the end regions usually have a taper which would not produce a usable fiber. And it would be unclear if a potential infringer could overcome the claim merely by having such a tapered region.

There is no antecedent basis for "the inner diameter". For example, looking at figure 5 of Fleming 5221306, at any one location 0-0-0 (for instance) there would be

different outer diameters. Which would make it likely that there are different inner diameters.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fleming 5000771, Gunther, Ohga, Obrien, Shimada, Saito, Nicholson and Shimizu are cited as also disclosing, constant diameters and/or low OH concentrations.

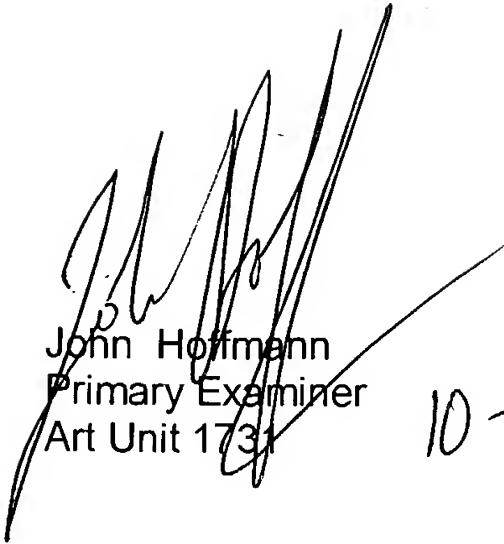
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/680,611  
Art Unit: 1731

Page 10

  
John Hoffmann  
Primary Examiner  
Art Unit 1731

10-14-04

jmh